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The purpose of this project was to investigate the effect of nurses work satisfaction in relation to patient satisfaction with nursing care in a base closure environment. Two different types of satisfaction surveys were administered to a convenience sample of nurses and adult nonpsychiatric inpatients at a federal tertiary care medical center scheduled for closure. Sixty-four military and civilian nurses completed the Index of Work Satisfaction survey questionnaire and seventy nine patients completed the Patient Satisfaction Instrument. To assess the effect of nurse work satisfaction on patient satisfaction with nursing care, Pearson's Product Moment Correlation was used, and a significant correlation was found to exist, with $r = 0.3804$, $p < 0.000$. The results suggest patient satisfaction was higher on units where nurses were more satisfied. Nurses also indicated their level of agreement with statements designed to gain an understanding of the effects of base closure on their work satisfaction. Patients responded to similar statements regarding their feelings about base closure and alternatives for care. In general, both nurses and patients reported they were making the necessary adjustments to cope with the imminent closure of the medical center. Hospital closure negatively affected patient satisfaction, even though the quality of care remained the same. By monitoring and addressing issues of work satisfaction affecting nurses, administrators may be able to limit factors which contribute to patient dissatisfaction in future downsizing or closure scenarios.

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GRADUATE PROGRAM IN HEALTH CARE ADMINISTRATION

***PERCEPTIONS OF NURSING CARE AND
JOB SATISFACTION AT A BRAC SITE***

**A GRADUATE MANAGEMENT PROJECT
PRESENTED TO THE FACULTY OF THE
U.S. ARMY-BAYLOR GRADUATE PROGRAM
IN HEALTH CARE ADMINISTRATION**

**BY
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MAY, 1996**

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ABSTRACT

The purpose of this project was to investigate the effect of nurses work satisfaction in relation to patient satisfaction with nursing care in a base closure environment. Two different types of satisfaction surveys were administered to a convenience sample of nurses and adult nonpsychiatric inpatients at a federal tertiary care medical center scheduled for closure. Sixty-four military and civilian nurses completed the Index of Work Satisfaction survey questionnaire and seventy nine patients completed the Patient Satisfaction Instrument. To assess the effect of nurse work satisfaction on patient satisfaction with nursing care, Pearson's Product Moment Correlation was used, and a significant correlation was found to exist, with $r = 0.3804$, $p < 0.000$. The results suggest patient satisfaction was higher on units where nurses were more satisfied. Nurses also indicated their level of agreement with statements designed to gain an understanding of the effects of base closure on their work satisfaction. Patients responded to similar statements regarding their feelings about base closure and alternatives for care. In general, both nurses and patients reported they were making the necessary adjustments to cope with the imminent closure of the medical center. Hospital closure negatively affected patient satisfaction, even though the quality of care remained the same. By monitoring and addressing issues of work satisfaction affecting nurses, administrators may be able to limit factors which contribute to patient dissatisfaction in future downsizing or closure scenarios.

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PERCEPTIONS OF NURSING CARE AND JOB SATISFACTION AT A BRAC SITE

INTRODUCTION

Background

A great deal of attention is placed on patient satisfaction as an important quality measure. The National Committee for Quality Assurance (NCQA) emphasizes patient satisfaction as an important outcome measure in the Health Plan Employer and Data Information Set (HEDIS) (Mangelsdorff 1994). Nurses, who have the most contact with patients in an inpatient setting, assume an instrumental role in patient treatment and subsequent satisfaction. A substantial amount of nursing and administrative resources go toward improving occupational satisfaction for nurses. This is done to minimize nurse turnover and because it is believed satisfied nurses will provide a better quality of care.

The impending closure of Fitzsimons Army Medical Center (FAMC) as a result of the 1995 Base Realignment and Closure (BRAC) process will result in the elimination of civilian and military nursing positions. It is hypothesized that facility closure deleteriously affects nurses' occupational satisfaction. Patient satisfaction may also be clouded by feelings of resentment or abandonment because they must seek alternative sources of medical care. These concerns are magnified by the speed with which the FAMC closure is taking place. Mundy and Gilcreast (1994) used Robert M. Tomasko's six steps to establish a framework for successful downsizing efforts. These steps are: "(1) set targets, (2) lay the groundwork, (3) get facts, (4) identify opportunities, (5) plan improvements, and (6) make it happen." They claim that if any of the

steps are omitted, or there is insufficient time to complete each step, it will negatively impact the organizational drawdown.

Others support the need for balancing factors in restoring equilibrium and avoiding crisis during drawdown. Domingue and Singleton (1993) identified “a realistic perception of the event, adequate situational support, and adequate coping mechanisms” as essential ingredients to helping staff through the turbulence of a closure process.

Unlike Letterman Army Medical Center (LAMC), which took almost five years to close after the 1989 Department of Defense BRAC announcement, FAMC is scheduled to close in less than one year. Although meticulous planning and coordination are underway, it is debatable whether there is sufficient time to complete each of the six-steps in the closure process outlined above. The closure must take place, but there is a great deal more turmoil in terms of personnel and resource management issues at FAMC than at LAMC. Mundy and Gilcreast (1994) described the advantages of the slower pace of closure at LAMC in Military Medicine.

Questions remain about the effect of nurse work satisfaction on patient satisfaction with nursing care. Additionally, because the overall military drawdown may eventually affect more military medical treatment facilities, questions exist about the effect of hospital closure or downsizing on nurses and patients alike during this process.

Problem Statement

There is a lack of documentation on the effects of military hospital closure on the provider-patient relationship. Specifically, it is unknown how closure or downsizing affects nurse work satisfaction, and the relationship between nurse work satisfaction and patient satisfaction

with nursing care. There is ample documentation in the literature about the negative community perceptions resulting from hospital closure. There is also evidence that closing a health care facility impacts on the community's access to health care and subsequently, their health status.

As hospitals downsize to meet budgetary constraints, nursing staffs are confronted with the familiar task of doing more with less. Military hospitals are no exception. It is hypothesized that this increases stress levels and has a negative impact on nurses work satisfaction. Furthermore, it is conjectured that patient satisfaction with their nursing care may be negatively affected by perceptions that their nurses suffer from low morale.

In a BRAC environment, the level of frustration that nurses have about the turmoil in their professional lives certainly could have a negative impact on their work satisfaction and on patient satisfaction. If nurses are performing work normally handled by multiple staff members, the patient's perceptions of the quality of nursing care may also be affected, and subsequently, their satisfaction with that care. Alternatively, if nurses have a cohesive working relationship and support from the organizational leadership, satisfaction with their work could be average or high.

Because one of the primary medical missions of FAMC is to provide quality tertiary care and conduct graduate medical education (GME), low patient satisfaction could adversely impact mission capability as patients seek care elsewhere. Thus, an essential requirement, especially during downsizing is to maintain quality care and satisfied patients until essential GME training comes to a conclusion.

Literature Review

Interest in work satisfaction is not a new phenomenon. Different schools of management have used a variety of approaches to address the subject. Those in the industrial school of

management believed that manipulating the environment to satisfy workers increased productivity (Taylor 1911). Herzburg, Mausner, & Syderman (1959) drew distinctions between factors that motivate personnel to perform better and those that merely prevent dissatisfaction (motivators versus hygiene factors). Like others in the human relations school of management, they claim the key to productivity is satisfied workers. Organizational theorists Lawler and Porter (1968) found that "the evidence indicates that a low but consistent relationship exists between satisfaction and performance, but it is not clear why this relationship exists."

In health care, these work satisfaction principles have been applied to a variety of personnel, primarily nurses. Nursing work satisfaction has been heavily researched for a variety of reasons, principally to increase productivity, decrease absenteeism, and minimize turnover. Several studies were motivated by the threat of unionization (Lawton, 1970). Numerous references of a direct relationship between turnover and occupational satisfaction have been reported in the literature (Cleary et al., 1989; Donabedian, 1988; Spitzer, 1988).

Slavitt and others (1979) surveyed 555 nurses in two teaching hospitals to define and measure levels of satisfaction in nurses using six factors relevant to nursing. These factors were selected because they were representative of the literature of that time. They included position, unit, education, experience, number of years at the hospital, and the respondent's age. Slavitt and others found that nurses in higher positions were more satisfied, and those working in special care units were more satisfied than nurses working in a ward environment. Interestingly, diploma-holding registered nurses had the highest level of satisfaction. Those with longevity of service greater than 7-10 years were most satisfied.

In contrast, Parrinello (1990) found no difference in work satisfaction among nurses with different educational backgrounds. Other factors reported to have an effect on nurse work satisfaction include career development relationships (Yoder 1995); collaborative decision making in nursing practice, unit management, and patient care (Vilardo, 1993; Nakata and Saylor, 1994; Relf, 1995); and autonomy, pay, organizational policies, task requirements, interaction with other health professionals during working hours, and professional status (Stamps and Piedmonte, 1986).

The closure of a hospital has profound and long-lasting effects on the involved staff (Godfrey, 1994). To a certain extent, these staff members experience the four stages of loss: denial, anger, bargaining, and acceptance. Describing a small-scale closure (one unit), Godfrey (1994) noted staff reactions to the decision to close their place of employment in such terms. To help alleviate this situation a mental health clinical nurse specialist was heavily involved in the closure process and assisted the leadership in evaluating the staff's reaction to the closure. They came to the general conclusion that employees were adequately adapting and the anger expressed was exhibited appropriately. The nurses maintained provision of high quality care, and there were no increases in adverse incidents or patient complaints. Recommendations to facilitate staff transition during closure included assisting staff in the preparation of resumes and referrals, working with human relations staff to place employees in other areas of the same system, and assisting with paperwork and phone calls "so that they could continue to focus on patient care" (Godfrey, 1994). Such support was in concert with Aquilera (1990), who identified three factors which contribute to successful adaptation from stressful events: "a realistic perception of the event, adequate situational support, and adequate coping mechanisms."

Another issue receiving a substantial amount of attention in the past decade is patient satisfaction. Consumer input regarding patient satisfaction is an important determinant of service output and quality assurance, especially on quality measures (Cleary et al. 1989, Donabedian 1988, Spitzer 1988). Davies and Ware (1988) concluded that consumer assessments of quality are valid and that bias from personal characteristics is insufficient to invalidate consumer ratings. They also found that "whatever quality means to the consumer, his or her perception of quality affects the choice among health care alternatives." Abramowitz and others found that patient satisfaction with nursing care was the strongest predictor of patient's overall satisfaction with their hospital stay (Abramowitz, Cote, & Berry, 1987, Doering, 1983). Donabedian (1988) emphasizes that patient satisfaction is one of the outcomes crucial to assessing quality of care. In search of a simple, inexpensive solution to soliciting qualitative customer feedback in a healthcare setting, Nelson and others (1991) developed the patient comment card. Their questions were designed to obtain patient feedback on key quality indicators. They described their analysis of the comments in terms of "complimentary...neutral or ambiguous....[or] bad experiences...."

Regarding hospital closure, some investigators reported a loss of health care coverage for certain groups of patients. Bindman, Keane, and Lurie (1990) reported a negative impact on the health care status of the poor when Shasta General Hospital in Redding, California closed in 1988. Using the Medical Outcome Short Form, the authors compared patients in the community surrounding Shasta with a neighboring community whose hospital did not close. They found a significant decline over time in access to health care and perceived health status, with increased reports of denied care and no regular provider (Bindman, Keane, and Lurie, 1990). Ironically, the authorities responsible for providing the community's care felt they had made more than adequate

preparations to fill the void left by Shasta General (Pugno, et al., 1991). Bindman's report underscored the importance of eliciting feedback from those affected when considering matters of public policy. Lurie (1984) reported that loss of health insurance coverage substantially reduced patient ratings of both access and quality of care, compared to previous levels and a control group.

In an effort to minimize the effects of closure on the beneficiary population, FAMC undertook a number of initiatives. The FAMC BRAC plan includes frequent briefings designed to inform military beneficiaries about alternatives to care. In the Military Health Services System (MHSS), a new system of managed care, TRICARE, is being implemented. TRICARE will come on line and offer beneficiaries under the age of 65 three options classified as Prime (a Health Maintenance Organization plan), Extra (a Preferred Provider plan), and Standard (a standard indemnity type of benefit). The Department of Defense (DoD) used a variety of approaches to inform the community of beneficiaries of their alternatives. Mass mailings, posters, briefings, and Health Benefits Advisors were all employed. Letterman also had an extensive patient education program in the form of briefings and individual counseling, which was well received by the beneficiaries (Bales, 1993).

More recently, researchers have turned their attention toward the relationship that may exist between patient satisfaction and nurse work satisfaction. It is theorized that nurses who are satisfied with their work will be more attentive to patient needs, leaving patients more satisfied with their care than patients who are cared for by less satisfied nurses. Parrinello (1990) found that job satisfaction of nurses was positively related to patient satisfaction with their hospital stay. McDaniel and Patrick (1992) found a direct relationship between registered nurse turnover, an indication of occupational dissatisfaction for nurses, and patient satisfaction. In a study involving

77 family planning clinics, Weisman and Nathanson (1985) found that client satisfaction with services was most strongly affected by the nursing staff's job satisfaction. They also found that client compliance was linked to their level of satisfaction. In their study, nursing occupational satisfaction indirectly affected patient compliance with contraceptive prescriptions. They pointed out that client satisfaction could also serve as a positive reinforcement for nurse occupational satisfaction (i.e., mutually reinforcing). Hinshaw and Atwood (1979) predicted that patient satisfaction would be influenced by, among other characteristics, job satisfaction of the nursing staff. Their Care-Comfort Study findings substantiated this theoretical prediction.

Not all studies support the positive relationship between nurse satisfaction and patient satisfaction. Goodell and Coeling (1994) found no significant difference in patient satisfaction as a function of nurse job satisfaction, using Pearson's product-moment correlation to compare nurse and patient responses to satisfaction surveys.

Less has been written about job satisfaction of military nurses. In a study by the Naval Postgraduate School, Kocher and Thomas (1994) examined satisfaction-related issues in the Army Nurse Corps. Army nurses work in a highly structured environment with limited personal freedom and an increased level of discipline. However, they have increased levels of autonomy and responsibility early in their careers, as compared to their civilian counterparts. As the MHSS undergoes continuous change, the relationships between nurse satisfaction and patient impressions with their care deserve further attention. Maloney and others (1993) found Army hospitals chronically understaffed for the nursing tasks required to provide quality patient care according to the Workload Management System for Nursing. The study examined nurses in a busy Army Community Hospital. To minimize the effects of understaffing, the nurses prioritized their

responsibilities, with less critical tasks neglected. One casualty of this process was their ability to attend professional development activities. Ironically, the researchers found that several non-nursing tasks or jobs that could be performed by less skilled personnel were not omitted. In conclusion, Maloney et al. (1993) stated "Comparing the tasks that nurses say they will find time for with those that can be given up, we find little emphasis on the caring aspect of nursing practice."

Research describing the effects of military hospital closure is even less abundant, mostly confined to Letterman Army Medical Center experiences. Mundy and Gilcreast (1994) described the effects of civilian workforce separations prior to the closure date. As the civilian staff left the organization for more stable employment prospects, the remaining military and civilian staff members were required to assume increasing levels of responsibility. This had a negative impact on morale because the decrease in workload did not keep pace with the staff exodus. To mitigate the negative effects of the closure on morale, LAMC's leadership brought in a civilian consulting firm to educate the staff on organizational change, its effect on staff, and coping strategies. The leadership was satisfied with the results. "Patient satisfaction surveys . . . and quality monitors indicate that standards of care are being met or exceeded" (Mundy, 1993).

Purpose

The purpose of this project was to examine the relationship between nurse work satisfaction and patient satisfaction in a base closure environment. There is a wealth of information in the literature describing nurse satisfaction with their work. Most of that literature examines nurses in a stable work environment. This project examines the relationship between nurse work satisfaction and patient satisfaction in an unstable environment. This paper addressed

the following research questions: (1) How does the turmoil in their professional lives created by the impending closure affect nurse work satisfaction? (2) Does nurse work satisfaction have an effect on patient satisfaction with nursing care? (3) How does the closure affect FAMC health care beneficiaries?

METHOD AND PROCEDURES

Sample

This descriptive study used a convenience sample of military and civilian nurses and their patients taken from six adult nonpsychiatric inpatient care units at Fitzsimons Army Medical Center, Aurora, Colorado. The units under study were three medical surgical wards, the Intensive Care Unit (ICU), Coronary Care Unit (CCU), and Same Day Surgery (SDSU).

Nurses

All registered and licensed practical nurses on each units in the study received a survey. To avoid the perception of coercion, the surveys were not distributed through normal supervisory channels, such as the head nurse. Instead, the investigator placed a survey with a cover letter requesting participation in each nurse's in-box. On one of the units, the Noncommissioned Officer In Charge (NCOIC) and the Head Nurse placed the surveys in the in-boxes, but did not discuss the surveys with the staff. The cover letter explained the purpose of the survey and emphasized that participation was strictly voluntary. The cover letter requesting volunteers stressed that no names or identifying data would be required and that the answers would only be seen by the investigator. It was also stressed that if the subject chose not to participate in the

survey there would be no career repercussions. Surveys were returned to the investigator via the installation distribution system and two drop boxes, located in the hospital lobby and on the units.

Patients

Patients consisted of inpatient military health care beneficiaries hospitalized at FAMC during the one-month period under study. All patients were adult non-psychiatric medical surgical inpatients. With the exception of the Same Day Surgery Unit, all patients were admitted for at least one day to the units under study. Study subjects were non-randomly selected by asking patients who were about to be discharged to participate in the survey. Patient responses were subsequently grouped by the unit to which they were assigned. The patients were designated into groups based on the unit to which they were assigned.

The investigator did not solicit responses from patients while they were in the ICU or CCU for the following reasons: (1) patients might not feel well enough to complete a survey when they were in a critical care environment; (2) performing the survey on a busy critical care unit might interfere with the patient's care; and (3) patients were not discharged directly from the ICU or CCU, but were first transferred to medical surgical wards.

The investigator planned on asking staff responsible for discharge paperwork to provide the patients with a survey packet (consisting of a cover letter and survey). However, this plan proved impractical because one individual was not assigned to handle all discharges on the units. Each of the nurses was responsible for discharging their own patients. Additionally, the pace on the units in the mornings when most patients were discharged was quite hectic, making it difficult for the nurses to distribute the surveys. To increase the number of surveys distributed, the

investigator personally visited the units where patients were discharged to solicit volunteers, with the exception of the Same Day Surgery Unit. On this unit, the staff offered to distribute the surveys, since patients were more likely to be discharged at different times of the day, and they had more time to provide the patient with the survey packet. The investigator provided the staff with a brief statement for patients explaining the project, emphasizing the need to contact the investigator for any questions or problems regarding the survey.

The cover letter included a thorough explanation of the survey. Patients received a postage paid envelope with their questionnaires, which were returned to the investigator via the United States Mail. When preparing to solicit patient participation on the wards, the investigator asked the staff which patients might be confused or otherwise incapable of participating. Those patients did not receive a survey. Patients willing to participate, but unable to complete the survey themselves, were asked if there was someone at home who could help them complete it. If there were no one available at home, those patients were also excluded from participation. Patients who indicated an unwillingness to participate were obviously excluded.

Demographic data included age, gender, number of days in the hospital for the current admission, and the primary care unit. Patients identified which unit or ward they were on from a list of six units. Three surveys were eliminated from analysis because the patient neglected to complete all of the demographic data, including the unit where treatment was received, required by the surveyor. Without knowledge of where the patient received nursing services, no correlation could be made with the nurse responses. Relatively few patients indicated that they had been cared for in the ICU or CCU. In designating which unit was the primary care unit, the investigator assigned any patient who acknowledged a stay in ICU or CCU as being from that unit

for analytical purposes. Voluntary participation was emphasized. It was stressed that no names or identifying data would be required and that the answers would only be seen by the investigator. The cover letter clearly stated that if the subjects chose not to participate in the survey it would not have an effect on the quality of their health care.

The cover letter informed participants that their responses would be coded to facilitate statistical analysis, and that consent would be implied by their completing and returning the survey. This project was exempt from the Fitzsimons Army Medical Center Institutional Review Committee review in accordance with AR 40-38, Exempted Research Category B-2, Health Care Delivery, because no identifying data, such as name or social security number, was required for patient participation.

Instruments

Permission from the authors to use the nursing survey instrument was obtained. Because the patient satisfaction instrument, published by Nancy Risser in Nursing Research in 1975, was in public domain, permission for its use was not required.

The Index of Work Satisfaction (IWS) by Slavitt et al. was selected to measure job satisfaction of nurses, because it has been widely used and validated in previous studies. The IWS (Appendix A) is a 44-item, self-reported questionnaire designed to measure the level of work satisfaction of hospital nurses. It assesses six components of work satisfaction: (1) pay (dollar remuneration and fringe benefits received for work done); (2) autonomy (amount of job-related independence, initiative, and freedom, either permitted or required in daily work activities); (3) task requirements (tasks or activities that must be done as a regular part of the job);

(4) organizational policies (management policies and procedures established by the hospital and nursing administration); (5) interaction (opportunities presented for both formal and informal social and professional contact during working hours); and (6) professional status (overall importance felt about the job at the personal level, as well as its importance to the organization and the community).

Respondents indicated the extent of their agreement or disagreement with each statement, using seven-point Likert-type scales, ranging from “strongly disagree” to “strongly agree.” For the purposes of this project, the IWS seven-point Likert scale was modified to a five-point scale to match the scale used for measuring patient satisfaction. It was estimated that this would have little impact on reliability of the instrument.

The statistic used to measure the strength of correlation between the weighted score (the IWS) and the unweighted summed score of the attitude part of the questionnaire is the Kendall’s Tau. For this instrument, the validated score published in the literature was 0.92. The authors used factor analysis to measure validity. Appendix B depicts the Z matrix used to calculate the Weighting Coefficient used to calculate the IWS for each component.

The investigator added statements to the IWS designed to assess nurses perceptions about closure or downsizing. The statements solicited responses regarding the level of frustration that nurses have about the turmoil in their professional lives, changes in the amount of work, or levels of responsibility. Additional statements regarding workplace relationships and post-downsizing employment were also included.

To evaluate patient satisfaction, the Patient Satisfaction Instrument (PSI), originally developed by Risser and refined by Hinshaw and Atwood for use in inpatient settings, was

selected because it too, has been widely used and validated in previous studies (Appendix C). The PSI is short and easy to use, an essential consideration when surveying patients (Ware and Hays, 1988). It was developed over a series of five clinical and administrative studies during an eight-year period with a total of 600 patients, primarily medical surgical inpatients and outpatients. The PSI process illustrates measurement precision by replication.

The PSI is a 25-item, five-point Likert-type summated rating scale with three dimensions of patient satisfaction: technical-professional care, trust, and patient education. It was adapted for use with inpatients from Risser's outpatient instrument. Internal consistency estimates appear satisfactory and stable across the various studies; e.g., alpha coefficients for the technical-professional subscale average .79, education coefficients average .78, and trust coefficients average .88. Inter-item, item-subscale, and inter-scale correlations corroborate the alphas. Construct validity estimates were made via factor analysis, convergent/discriminant technique, discriminance, and predictive modeling. Factor analysis showed stable loadings consistently above the .500 criterion level across studies. The 73.4% explained variance confirms the measurement of the patient satisfaction construct, but some question remains as to the three aspects of patient satisfaction being indexed.

Empirical correlations moderately substantiated the multiple, convergent/discriminant predictions. Discriminance was strongly documented for all but the education subscale, which had modest support. Predictive modeling produced moderate to strong validity estimates. Overall, the PSI has acceptable levels of validity and reliability with refinements indicated (Hinshaw and Atwood, 1982).

The PSI was supplemented with statements designed by the investigator to elicit patient attitudes regarding base closure and downsizing. Patients responded to four statements regarding their primary source of medical care and plans for seeking care after FAMC closes. Only four statements were used to maintain the simplicity of the PSI.

To assess the reliability and validity of the new BRAC-related IWS questions, a pilot study was administered to ten nurses not directly involved in patient care, and therefore not eligible to participate in the satisfaction survey. Most felt the questions were relevant to determining nurse

work satisfaction in a base closure environment. An important task in establishing content validity was defining the terminology selected for examination in this portion of the study. To establish a relationship between turmoil and satisfaction, it was imperative that “turmoil” meant generally the same thing to all participants. To establish what “turmoil” meant for the purposes of the project, a dictionary definition of “turmoil” was included as part of the question. These questions were scored by adding up the responses to obtain a work satisfaction score specifically related to BRAC issues.

Statistical Methods

Responses of nurses and patients were grouped by unit. To assess the effects of nurse work satisfaction on patient satisfaction with nursing care, Pearson’s Product Moment Correlation was used. The alpha level for statistical testing was set at 0.05 (Kerlinger 1986; Polit and Hungler 1993). To perform the correlation, an average of all nurse and all patient total satisfaction scores was used.

RESULTS

Nurses

Most descriptive data were eliminated from the nursing questionnaire because demographic factors for a relatively small population could potentially be considered as identifying information in an anonymous survey. Of the 149 nurses surveyed, 64 returned the questionnaire, a response rate of 43 percent. Seventy three percent of the respondents were registered nurses. Sixty seven percent of all respondents identified themselves as military nurses.

Average satisfaction scores for nurses varied among the six units from a low of 2.57 to a high of 3.53. Their mean total work satisfaction score was 3.10, with a standard deviation of

0.21. The critical care nurses (ICU, CCU, and SDSU) were more satisfied than their medical surgical ward counterparts. Overall results indicated that nurses felt autonomy was the most important subscale item, and the one with which they were most satisfied. Table 1 lists the rankings of the order of importance that FAMC nurses placed on each of the components and their satisfaction with them. Table 2 displays a unit level breakdown of scores.

TABLE 1
ORDER OF IMPORTANCE AND MEAN SATISFACTION
SCORES FOR EACH IWS COMPONENT

| Priority of importance | Satisfaction score |
|-------------------------------|---------------------------|
| Autonomy | 803.23 |
| Pay | 655.97 |
| Professional Status | 766.57 |
| Interaction | 637.76 |
| Task Requirements | 478.89 |
| Organizational Policies | 369.53 |
| Average IWS Score | 618.66 |

TABLE 2
MEAN NURSE SATISFACTION SCORES BY UNIT

| | 2 East | 2 West | 5 East | ICU | CCU | SDSU |
|--------------------------------|---------------|---------------|---------------|-------------|-------------|-------------|
| Autonomy | 3.10 | 2.82 | 2.90 | 2.91 | 2.99 | 2.91 |
| Professional Status | 2.93 | 3.01 | 3.12 | 3.03 | 2.92 | 3.29 |
| Pay | 2.97 | 3.20 | 3.12 | 3.28 | 3.46 | 3.12 |
| Interaction | 2.80 | 2.60 | 2.68 | 3.11 | 2.73 | 3.20 |
| Task Requirements | 3.45 | 3.38 | 3.24 | 3.48 | 3.68 | 3.54 |
| Organizational Policies | 2.56 | 2.95 | 2.90 | 2.99 | 2.92 | 3.07 |
| Total | 3.02 | 3.05 | 3.06 | 3.14 | 3.19 | 3.17 |

Coefficient alphas were calculated for each component of the IWS to assess the internal reliability of the six subscales and the total scale. The alpha coefficients for each component and for the total scale are displayed in Table 3.

TABLE 3
INTERNAL RELIABILITY OF INDEX OF WORK SATISFACTION

| Component | Number of items | Coefficient alpha |
|-------------------------|------------------------|--------------------------|
| Autonomy | 8 | 0.2104 |
| Pay | 6 | 0.6348 |
| Professional Status | 7 | 0.4155 |
| Interaction | 10 | 0.6171 |
| Task Requirements | 6 | 0.3556 |
| Organizational Policies | 7 | 0.0849 |
| Total Scale | 44 | 0.2482 |

The nursing staff also indicated their level of agreement with statements assessing the effects of downsizing and base closure on their working relationships and work satisfaction. In general, the nurses felt that military and civilian staff worked well together. Most nurses have plans for employment when FAMC closes and are satisfied with their options. Furthermore, they did not feel that there had been appreciable changes in their duties or assigned responsibilities, but acknowledged feeling frustrated by the turmoil in their professional lives created by the closure process. The average BRAC nursing work satisfaction score was 3.23 on a scale of one to five, ranging from 1.92 to 4.50. Table 4 summarizes nurse responses to the BRAC related questions.

TABLE 4. SUMMARY OF NURSE RESPONSES TO BRAC RELATED QUESTIONS

| Statement | Average Score | Average Response |
|--|----------------------|-------------------------|
| Military and civilian work well together | 3.48 | Agree |
| Readiness training interferes with patient care | 3.29 | Agree |
| Displeased with post-closure employment opportunities | 3.05 | Neutral |
| Drawdown presents challenging opportunities | 2.71 | Disagree |
| Frustrated with turmoil created by BRAC | 3.49 | Agree |
| Definite employment plans post closure | 4.23 | Agree |
| Satisfied with employment plan | 3.84 | Agree |
| Nursing staff helps each other with change in workload | 3.33 | Neutral |
| Like position as federal employee | 3.86 | Agree |
| Civilian and military <i>don't</i> work well together | 2.20 | Disagree |
| BRAC creates too much responsibility | 2.28 | Disagree |
| Difference in military-civilian working relationships since BRAC began | 2.94 | Neutral |
| Total | 3.23 | |

Patients

The descriptive statistics of the patient sample are presented in Table 5. Military status of the patient sample is depicted in Table 6. Seventy nine patient questionnaires were used in the computations presented here. Patient respondents consisted of 37 female and 38 male active duty and retired US military service personnel and their family members with an average age of 58 years ranging from 24 to 81 years. Seventy nine percent of respondents were retired service members or their family members. Four patients neglected to fully complete the demographic

survey items, but since they indicated the unit where they received nursing services, their data was included in the results. The patient mean total satisfaction score was 3.59, ranging from 1.87 to 5.0. Table 7 breaks down the subscale scores. Patient satisfaction with the educational component of nursing care was 3.48, the professional component, 3.61, and the trust component, 3.66. Females were more satisfied than males, a trend supported by the literature (Ware, Davies, and Stewart, 1978). Patients strongly agreed that they were frustrated with the closure of FAMC, which most acknowledged as their primary source of medical care. Patients tended to be dissatisfied with their alternatives for care after base closure. Many were unsure where they would receive their medical care post closure.

TABLE 5. PATIENT RESPONDENTS (n = 79)

| Gender | n | % | Service | n | % | Unit | n | % |
|---------------|----------|----------|----------------|----------|----------|-------------|----------|----------|
| Male | 38 | 48.1% | Army | 24 | 30.4% | 2 East | 16 | 20.3 % |
| Female | 37 | 46.8% | Air Force | 33 | 41.8% | 2 West | 13 | 16.5 % |
| Didn't answer | 4 | 5.1% | Navy | 5 | 6.3% | 5 East | 23 | 29.1 % |
| | | | Coast Guard | 1 | 1.3% | ICU | 6 | 7.6 % |
| | | | Didn't answer | 16 | 20.2 % | CCU | 5 | 6.3 % |
| | | | | | | SDSU | 16 | 20.3 % |

TABLE 6. MILITARY STATUS OF THE PATIENT SAMPLE

| Military Status | n | % |
|------------------------|----------|----------|
| Active Duty | 14 | 17.7% |
| Family Members | 34 | 43% |
| Didn't answer | 31 | 39.3 % |

The last question, "Please feel free to comment on any aspect of your care," received mixed responses. Nineteen patients (24 percent) chose to express their dissatisfaction with the closure of FAMC in narrative form. Of the 43 respondents who chose to comment in the narrative portion on their care, 84 percent commented favorably about the quality healthcare and nursing services they received.

TABLE 7. MEAN PATIENT SATISFACTION SCORES BY UNIT

| | 2 East | 2 West | 5 East | ICU | CCU | SDSU |
|----------------------|---------------|---------------|---------------|-------------|-------------|-------------|
| Professional | 3.40 | 3.73 | 3.38 | 3.74 | 3.57 | 4.00 |
| Educational | 3.28 | 3.53 | 3.38 | 3.66 | 3.26 | 3.77 |
| Trust | 3.42 | 3.87 | 3.47 | 3.71 | 3.49 | 4.03 |
| Average total | 3.37 | 3.71 | 3.41 | 3.70 | 3.44 | 3.93 |

Correlation Results

In evaluating the effect of nurse total work satisfaction on patient satisfaction with nursing care, a significant correlation exists, with $r = 0.3804$, $p < 0.000$. Overall results indicated that patient satisfaction was higher on units where nurses were more satisfied. Mean satisfaction scores for both groups are arrayed in the Table 8 and depicted in the scatterplot diagram in figure 1. Correlation coefficients for the Patient Satisfaction Instrument are displayed in Table 9.

TABLE 8
MEAN SATISFACTION SCORES OF BOTH GROUPS BY UNIT

| | Nurses | Patients |
|--------------|---------------|-----------------|
| 2 East | 3.02 | 3.37 |
| 2 West | 3.05 | 3.71 |
| 5 East | 3.06 | 3.41 |
| ICU | 3.14 | 3.70 |
| CCU | 3.19 | 3.44 |
| SDSU | 3.17 | 3.93 |
| Total | 3.11 | 3.59 |

TABLE 9
CORRELATION COEFFICIENTS FOR THE
PATIENT SATISFACTION INSTRUMENT

| | Trust | Education | Professional |
|---------------------|--------------|------------------|---------------------|
| Trust | 1 | | |
| Education | .8943 | 1 | |
| Professional | .9375 | .8708 | 1 |

p < 0.00

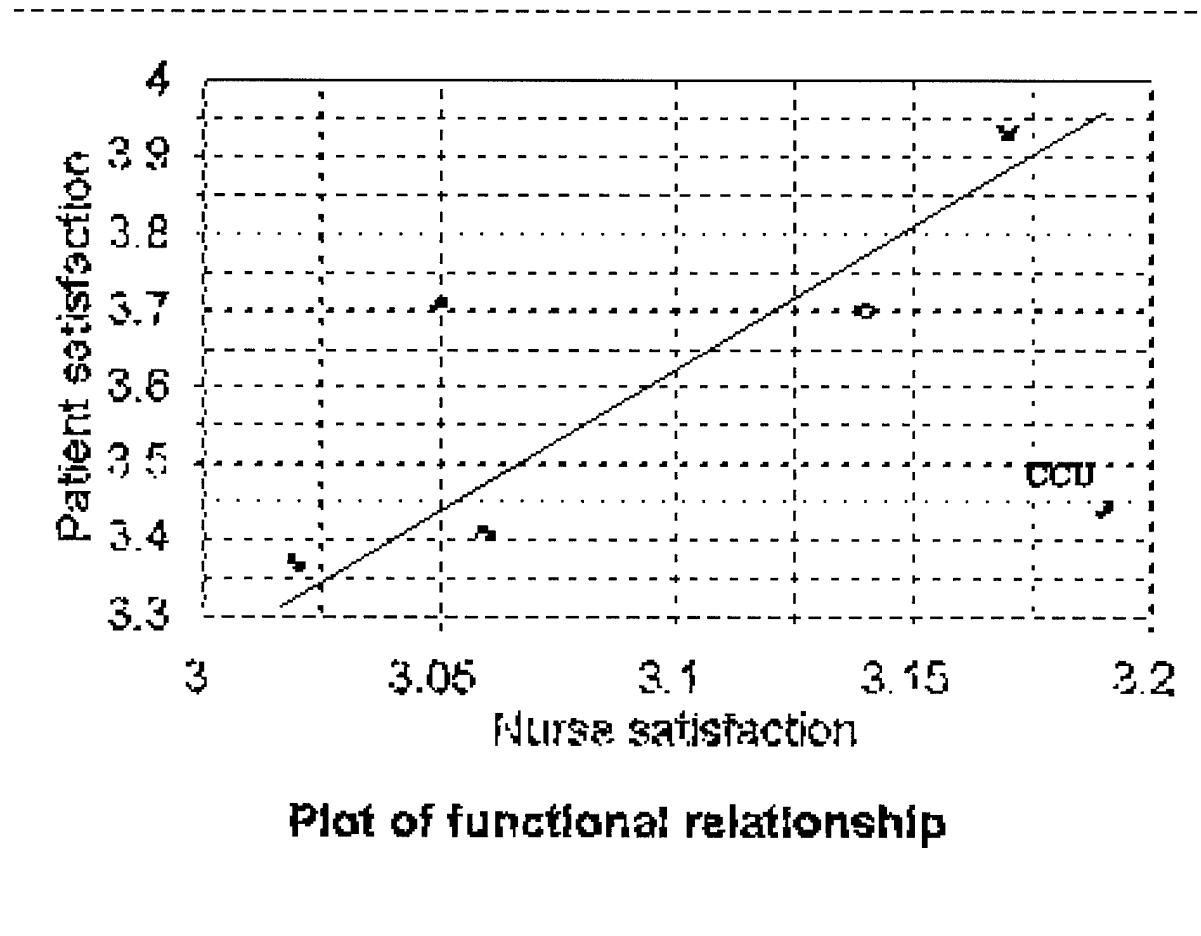


Figure 1. Plot of Functional Relationship Between Nurse Work Satisfaction and Patient Satisfaction With Nursing Care.

DISCUSSION

The purpose of this project was to examine the relationship between nurse work satisfaction and patient satisfaction in a base closure environment. The first research question examined the effect of turmoil in nurses' professional lives created by the impending closure of their workplace on their work satisfaction. Previous studies, using the IWS instrument, indicated that autonomy and pay were the most important components for nursing work satisfaction, while

task requirements and organizational policies were the least important (Stamps and Piedmonte, 1986). This trend was also observed in the FAMC sample. The components that mattered most to a majority of the nurse respondents in this study (autonomy and pay) were the same items with which the FAMC nurses were most satisfied. The results of this project reinforce those reported by Parrinello, who found a correlation between nurse work satisfaction and patient satisfaction with hospital nursing care. However, they differ from Goodell and Coeling (1994), who found no significant difference in patient satisfaction as a function of nurse job satisfaction.

In general, the results reported for satisfaction with component-specific priorities of autonomy, pay, professional status, interaction, task requirements, and organizational requirements, parallel those of other studies described by Slavitt, Stamps, and Piedmonte (1986). In Goodell and Coeling's (1994) study, nurse respondents felt pay was most important, followed by professional status and autonomy.

The study also examined the relationship between nurse work satisfaction and patient satisfaction with nursing care in a base closure environment. Results suggested that a functional relationship existed between the two. Specifically, when grouped by unit, the scatterplot diagram depicted in figure 1 suggested a functional relationship for four of the six units, with total patient satisfaction increasing in direct proportion to nursing satisfaction. Two outliers existed, the CCU and one medical surgical ward. The small sample size, especially from the CCU limits the level of confidence placed in these findings and precludes inferential statistical analysis of the responses of the sample population.

In determining the effects of the closure on FAMC health care beneficiaries, the results suggest a negative impact on their sense of security regarding their source of health care in the

future. Although the DoD has made arrangements for continued health care availability in the affected community, the survey respondents indicated their dissatisfaction with those arrangements. Part of this dissatisfaction could be related to a lack of knowledge and uncertainty about quality of civilian healthcare providers and TRICARE. Alternatively, their objection could be based more on financial concerns.

Limitations

The project had several weaknesses. Since there was no comparable evaluation of nurse and patient satisfaction in the FAMC population before the announcement that it was to be closed, no comparisons can be made to determine the actual effect that base closure has had on these factors.

In the work satisfaction questionnaire, the BRAC questions for nurses asked only if the respondent has been required to perform tasks above their capabilities. Some nurses commented that just the opposite was true. As the medical center downsized to an outpatient healthcare facility, the staff found themselves performing responsibilities below their normal level of expertise. For example, senior nurses, accustomed to management roles, found themselves providing nursing care in a swing shift environment.

Differences between military nurses, most of whom will be reassigned within the MHSS, and their civilian counterparts, who must seek employment in the competitive Denver healthcare marketplace, were not accounted for in the study. Other variables not accounted for in the study, such as life stressors, divorce, financial difficulties, or poor health of the subject or family, may have had a negative effect on satisfaction of both patients and nurses. Indeed, FAMC underwent

a substantial amount of turmoil because of the rapid closure process. In less than one year virtually all the nurses will move on to other locations or institutions.

For the purpose of this project, the IWS seven-point Likert scale was modified to a five-point scale to match the scale used for measuring patient satisfaction. It was estimated that this would have little impact on reliability of the instrument. Numerous studies have validated the internal reliability of the seven-point Likert scale IWS instrument. Published Chronbach's Alpha were well within acceptable range, averaging 0.82. Stamps and Piedmonte (1986) reported reliability estimates ranging from 0.52 to 0.84 in numerous studies reviewed by them. Parrinello (1990) reported a Chronbach's alpha of 0.87. The range of values in this study was not consistent with those reported by others. The total scale Chronbach's alpha on the FAMC sample, after modifying the scale, was 0.24, which was substantially lower than the total alpha reported by Stamps and Piedmonte, and Parrinello. It is postulated that the reliability of the instrument in the present study was affected by modification of the scale and the small sample size.

The results of the project are inconclusive concerning how closure of a medical center affected patient satisfaction with nursing care. A variable not measured could account for many of the trends identified in this project. If patients are satisfied, this may impact the nursing staff's level of job satisfaction, a factor not addressed in the survey. The survey did not detect individual variation between providers nor the quality of individual interactions. It only measured overall patient satisfaction with care and nurse satisfaction with work.

Patients may have considered their interactions with personnel who were not nurses when responding to the survey. For example, the patient might not have known an employee's status and perceived a corpsman as a nurse. The convenience sample also limits the applicability of

results to a larger population. Finally, as pointed out by McDaniel and Patrick, “. . . while random selection is preferable in terms of the internal validity of a research design, it may not be feasible for hospitalized inpatient populations.” Because the study design did not control for the number of days each nurse cared for each patient, it was not possible to measure the effects of differing amounts of contact between nurses and patients. Perhaps including all levels of personnel providing nursing care instead of limiting the scope to RNs and LPNs would have been a better methodology.

When patients receiving care on multiple units indicated that they were especially satisfied or dissatisfied with their care on one of the units, it was not clear which unit they had strong feelings about. For example, one patient who was on a medical surgical ward and in the ICU, responded to most questions negatively. However, in the blank section at the end, his narrative praised the ICU staff. Since a patient who received intensive or coronary care may have spent more time on a ward, been discharged from the ward, and received their survey on the ward, they may have been more likely to respond to the questions with the ward nursing staff in mind.

Some of the BRAC questions contained potentially confusing phrases. For the nurses, one item, which stated “I am *not* happy with employment opportunities available to me when I no longer work at Fitzsimons,” violated principles of simplicity. This could have adversely affected the respondent’s ability to understand what was being asked. In general, the knowledge acquired from a survey will be more useful if questions are phrased neutrally and the negative is not emphasized (Ulrich, 1983).

CONCLUSIONS AND RECOMMENDATIONS

This project was descriptive in nature, designed to examine the human relations aspect of downsizing in a military hospital. The results suggest that hospital closure creates situations that have the potential of adversely affecting nurse work satisfaction. Subsequently, nurses not satisfied with their work may be more at risk of creating patients not satisfied with their nursing care. Even in today's litigious society, patients are willing to accept many hardships if they are treated courteously. When mistakes are made, there is less likely to be a lawsuit if there is a good provider-patient relationship (Klein and Klein, 1995). When nursing managers understand the work environment and know what nurses value in their professional lives, extra attention can be focused on critical areas to minimize risks associated with unsatisfied nurses. Nursing leadership can use incentive awards, training and education to address those concerns.

Numerous recommendations for effective management of staff experiencing stressful events have been discussed in the literature. The nursing leadership at FAMC implemented many of them during the closure process. The Chief Nurse conducted monthly meetings, which included as the first order of business current information on the status of closure. A Psychiatric Advanced Practice Nurse made regular rounds and conducted sensing sessions with employees. The Chief of Nursing Administration personally managed the assignment of each military nurse with the Army Nurse Corp branch managers. Leadership encouraged civilian staff to begin their job search as soon as possible and not wait until the end to arrange for new employment. The civil service Priority Placement Program found new jobs for several nurses. Additionally, the education center, with computerized job banks, employment and education counseling, and computer labs, was made readily available to nursing staff. Software and instruction on resume

writing were also available, and nurses were given time off to attend training. Although there was denial and anger expressed regarding FAMC's closure, nursing leadership's rapid response in preparing nurses for change helps explain the successful adaptation of FAMC nurses to the impending transition.

Some aspects of nurse work satisfaction are more difficult for those in leadership positions to influence, such as occupational status, amount of interaction with other nurses and medical staff, and self actualization. By understanding what satisfies nurses in their work, management can place more emphasis on factors that really matter to employees. Improving supervisory training programs, organizational structure, and use of automation on the worksite are just a few examples of worksite changes which can contribute to improved work satisfaction in health professionals (Slavitt, et al., 1979).

Overall, there was a general trend of patients being more satisfied than nurses. When grouped by unit, a pattern emerged. Patients tended to agree with statements that they were satisfied with their care. This could imply that the nursing staff maintained their professionalism and concern about quality care despite adverse personal circumstances, giving patients the feeling that they genuinely cared for their well being. This is indicative of nursing professionalism, quality care, and effective management of turmoil and stress in a health care organization.

By measuring nursing job satisfaction, administrators can more effectively evaluate which strategies best accomplish improvement. In a BRAC environment, inpatient care continues until final closure of the medical center. High standards of quality must continue during the downsizing process.

Because patients have numerous alternatives for obtaining health care, patient satisfaction becomes a discriminator in a highly competitive environment. In the TRICARE system, the military direct care system will be competing with civilian contractors for patient enrollment. If patients perceive the MHSS as unresponsive to their needs, they will be more inclined to sign up for the contractor's panel.

Although closing FAMC does not equate to a beneficiary losing access to health care, many patients perceive it as such. They may now be required to use the Civilian Health And Medical Program of the Uniformed Services (CHAMPUS), Medicare, or civilian health insurance coverage, which employ co-payments and deductibles, considerably increasing their out of pocket expense. This causes considerable stress because a substantial portion of FAMC health care beneficiaries are retirees and their family members, many of whom are on fixed incomes. This point has been quite vocally expressed at medical benefit briefings and in numerous other forums, including the comments section of the survey mentioned in this study.

Recommendations

In today's austere fiscal environment, there is likely to be more consolidation and closure of military medical treatment facilities. Civilian systems also face consolidation and closure as managed care expands and the shift to outpatient treatment continues (Domingue and Singleton, 1993). Other facilities should consider their risk of downsizing in their strategic planning. The leadership should include nurse and patient satisfaction among the key management indicators that they and the human resources staff monitor. Monitoring patient complaints, potentially compensable events, and workplace violence may also reveal how the organization adapts to

change. Having a baseline assessment acquired from this type of study and making comparisons in the months following announcement of downsizing will allow the leadership to make appropriate decisions for both nursing personnel and patients during the process. This will promote more effective intervention strategies. Future surveys of MHSS health care beneficiaries should include questions to determine why they are dissatisfied with health care alternatives to the direct care system. Finally, if indeed, nurse work satisfaction has a relationship to patient satisfaction, then more emphasis should be placed on this area of human resources.

APPENDIX

- A. The Index of Work Satisfaction
- B. IWS Scoring Procedure
- C. The Patient Satisfaction Instrument
- D. Modifications

APPENDIX A

The Index of Work Satisfaction

Part A (Paired Comparisons)

Listed and briefly defined on this sheet of paper are six terms or factors that are involved in how people feel about their work situation. Each factor has something to do with "work satisfaction". We are interested in determining which of these is most important to you in relation to the others.

Please carefully read the definitions for each factor as given below.

1. Pay - dollar remuneration and fringe benefits received for work done.
2. Autonomy - amount of job-related independence, initiative, and freedom, either permitted or required in daily work activities
3. Task Requirements - tasks or activities that must be done as a regular part of the job
4. Organizational Policies - management policies and procedures put forward by the hospital and nursing administration of this hospital
5. Interaction - opportunities presented for both formal and informal social and professional contact during working hours
6. Professional Status - overall importance or significance felt about your job, both in your view and the view of others

Scoring. These factors are presented in pairs on the questionnaire that you have been given. Only 15 pairs are presented: this is every set of combinations. No pair is repeated or reversed. For each pair of items, decide which one is *more important* to your job satisfaction or morale. Please indicate your choice by a check on the line in front of it. For example: If you felt that Pay (as defined above) is more important than Autonomy (as defined above), check the line before pay.

_____ Pay or _____ Autonomy

We realize it will be difficult to make choices in some cases. However, please do try to select the factor which is more important to you. Please make an effort to answer every item; do not change any of your answers.

- | | | |
|-----------------------------------|----|-------------------------------|
| 1. _____ Professional Status | or | _____ Organizational Policies |
| 2. _____ Pay | or | _____ Task Requirements |
| 3. _____ Organizational Policies | or | _____ Interaction |
| 4. _____ Task Requirements | or | _____ Organizational Policies |
| 5. _____ Professional Status | or | _____ Task Requirements |
| 6. _____ Pay | or | _____ Autonomy |
| 7. _____ Professional Status | or | _____ Interaction |
| 8. _____ Professional Status | or | _____ Autonomy |
| 9. _____ Interaction | or | _____ Task Requirements |
| 10. _____ Interaction | or | _____ Pay |
| 11. _____ Autonomy | or | _____ Task Requirements |
| 12. _____ Organizational Policies | or | _____ Autonomy |
| 13. _____ Pay | or | _____ Professional Status |
| 14. _____ Interaction | or | _____ Autonomy |
| 15. _____ Organizational Policies | or | _____ Pay |

Part B (Attitude Questionnaire)

The following items represent statements about satisfaction with your occupation. Please respond to each item. It may be very difficult to fit your responses into the seven categories; in that case, select the category that *comes closest* to your response to the statement. It is very important that you give your *honest* opinion. Please do not go back and change any of your answers.

Instructions for Scoring Please circle the number that most closely indicates how you feel about each statement. The *left* set of numbers indicates degrees of *disagreement*. The *right* set of numbers indicates degrees of *agreement*. The *center* number means "undecided". Please use it as little as possible. For example, if you *strongly disagree* with the first item, circle one; if you *moderately agree* with the first statement, you would circle six.

Remember: The more strongly you feel about the statement, the further from the center you should circle, with disagreement to the left and agreement to the right.

| | Disagree | | | | Agree |
|--|----------|---|---|---|-------|
| 1. My present salary is satisfactory. | 1 | 2 | 3 | 4 | 5 |
| 2. Most people do not sufficiently appreciate the importance of nursing care to hospital patients. | 1 | 2 | 3 | 4 | 5 |
| 3. The nursing personnel on my service do not hesitate to pitch in and help one another out when things get in a rush. | 1 | 2 | 3 | 4 | 5 |
| 4. There is too much clerical and "paperwork" required of nursing personnel in this hospital. | 1 | 2 | 3 | 4 | 5 |
| 5. The nursing staff has sufficient control over scheduling their own work shifts in my hospital. | 1 | 2 | 3 | 4 | 5 |
| 6. Physicians in general cooperate with nursing staff on my unit. | 1 | 2 | 3 | 4 | 5 |
| 7. I feel that I am supervised more closely than is necessary. | 1 | 2 | 3 | 4 | 5 |
| 8. Excluding myself, it is my impression that a lot of nursing personnel in my hospital are dissatisfied with their pay. | 1 | 2 | 3 | 4 | 5 |
| 9. Nursing is a long way from being recognized as a profession. | 1 | 2 | 3 | 4 | 5 |
| 10. New employees are not quickly made to "feel at home" on my unit. | 1 | 2 | 3 | 4 | 5 |
| 11. I think I could do a better job if I did not have so much to do all the time. | 1 | 2 | 3 | 4 | 5 |
| 12. There is a great gap between the administration of this hospital and the daily problems of the nursing service. | 1 | 2 | 3 | 4 | 5 |
| 13. I feel I have sufficient input into the program of care for each of my patients. | 1 | 2 | 3 | 4 | 5 |
| 14. Considering what is expected of nursing service personnel at this hospital, the pay we get is reasonable. | 1 | 2 | 3 | 4 | 5 |
| 15. There is no doubt whatever in my mind that whatever I do on my job is really important. | 1 | 2 | 3 | 4 | 5 |

| | Disagree | | | | Agree |
|--|----------|---|---|---|-------|
| 16. There is a good deal of teamwork and cooperation between various levels of nursing personnel on my service. | 1 | 2 | 3 | 4 | 5 |
| 17. I have too much responsibility and not enough authority. | 1 | 2 | 3 | 4 | 5 |
| 18. There are not enough opportunities for advancement of nursing personnel at this hospital. | 1 | 2 | 3 | 4 | 5 |
| 19. There is a lot of teamwork between nurses and doctors on my unit. | 1 | 2 | 3 | 4 | 5 |
| 20. On my service, my supervisors make all the decisions. I Have little direct control over my own work. | 1 | 2 | 3 | 4 | 5 |
| 21. The present rate of increase in pay for nursing service Personnel at this hospital is not satisfactory. | 1 | 2 | 3 | 4 | 5 |
| 22. I am satisfied with the types of activities that I do on my job. | 1 | 2 | 3 | 4 | 5 |
| 23. The nursing personnel on my service are not as friendly and outgoing as I would like. | 1 | 2 | 3 | 4 | 5 |
| 24. I have plenty of time and opportunity to discuss patient care problems with other nursing service personnel. | 1 | 2 | 3 | 4 | 5 |
| 25. There is ample opportunity for nursing staff to participate in the administrative decision-making process. | 1 | 2 | 3 | 4 | 5 |
| 26. A great deal of independence is permitted, if not required, of me. | 1 | 2 | 3 | 4 | 5 |
| 27. What I do on my job does not add up to anything really significant. | 1 | 2 | 3 | 4 | 5 |
| 28. There is a lot of "rank consciousness" on my unit. Nursing personnel seldom mingle with others of lower ranks. | 1 | 2 | 3 | 4 | 5 |
| 29. I have sufficient time for direct patient care. | 1 | 2 | 3 | 4 | 5 |
| 30. I am sometimes frustrated because all of my activities seem programmed for me. | 1 | 2 | 3 | 4 | 5 |
| 31. I am sometimes required to do things on my job that are against my better professional nursing judgement. | 1 | 2 | 3 | 4 | 5 |
| 32. From what I hear from and about nursing service personnel at other hospitals, we at this hospital are being fairly paid. | 1 | 2 | 3 | 4 | 5 |
| 33. Administrative decisions at this hospital interfere too much with patient care. | 1 | 2 | 3 | 4 | 5 |
| 34. It makes me proud to talk to other people about what I do on my job. | 1 | 2 | 3 | 4 | 5 |
| 35. I wish the physicians here would show more respect for the skill and knowledge of the nursing staff. | 1 | 2 | 3 | 4 | 5 |
| 36. I could deliver much better care if I could have more time with each patient. | 1 | 2 | 3 | 4 | 5 |
| 37. Physicians at this hospital generally understand and appreciate what the nursing staff does. | 1 | 2 | 3 | 4 | 5 |
| 38. If I had the decision to make all over again, I would still go into nursing. | 1 | 2 | 3 | 4 | 5 |
| 39. The physicians in this hospital look down too much on the nursing staff. | 1 | 2 | 3 | 4 | 5 |
| 40. I have all the voice in planning policies and procedures for this hospital and my unit that I want. | 1 | 2 | 3 | 4 | 5 |
| 41. My particular job really doesn't require much skill or "know-how." | 1 | 2 | 3 | 4 | 5 |

| | Disagree | | | Agree | |
|--|----------|---|---|-------|---|
| 42. The nursing administrators generally consult with the staff on daily problems and procedures. | 1 | 2 | 3 | 4 | 5 |
| 43. I have the freedom in my work to make important decisions as I see fit, and can count on my supervisors to back me up. | 1 | 2 | 3 | 4 | 5 |
| 44. An upgrading of pay schedules for nursing personnel is needed at this hospital. | 1 | 2 | 3 | 4 | 5 |

Appendix B. IWS Scoring Procedure

| Least Favored | Most Favored | | | | | |
|--|--------------|----------|-------------------|-------------------------|---------------------|-------------|
| | Pay | Autonomy | Task Requirements | Organizational Policies | Professional Status | Interaction |
| Pay | ----- | 0.303 | -0.662 | -0.713 | -0.020 | -0.519 |
| Autonomy | -0.303 | ----- | -0.820 | -0.935 | -0.820 | -0.765 |
| Task Requirements | 0.613 | 0.820 | ----- | -0.476 | 0.388 | 0.220 |
| Organizational Policies | 0.713 | 0.878 | 0.432 | ----- | 0.935 | 0.613 |
| Professional Status | -0.020 | 0.820 | -0.388 | -0.935 | ----- | -0.141 |
| Interaction | 0.476 | 0.713 | -0.261 | -0.662 | 0.141 | ----- |
| Sum: | 1.479 | 3.534 | -1.699 | -3.721 | 0.624 | -0.592 |
| Mean: | 0.2958 | 0.7068 | -0.3398 | -0.7442 | 0.1248 | -0.1184 |
| Add 3.100 to each mean to get component weighting coefficient: | | | | | | |
| | 3.3958 | 3.8068 | 2.7602 | 2.3558 | 3.2248 | 2.9816 |
| IWS: | 655.97 | 803.23 | 478.89 | 369.53 | 766.57 | 637.76 |
| (The above coefficient multiplied by component mean scores) | | | | | | |
| Overall IWS: $618.66 / 64 = 9.67$ | | | | | | |

APPENDIX C

The Patient Satisfaction Instrument

I am a graduate student interested in your opinion of the care you have received. You are being asked to voluntarily give your opinion on the statements in this questionnaire. By responding to the questionnaire, you will be giving your consent to participate in a study examining patient satisfaction with nursing care. Your name is not on the questionnaire or the interview form, and you may choose not to answer some or all of the questions, if you so desire, without affecting your nursing care.

Age _____
 Gender (M/F) _____
 Date _____

Number of days in hospital
 This admission _____
 Number of hospital admissions _____

What unit were you a patient on (*please circle all that apply*)? Same Day Surgery

| | | | | |
|--------|--------|--------|-----|-----|
| 2 East | 2 West | 5 East | ICU | CCU |
|--------|--------|--------|-----|-----|

Please check your beneficiary status (all that apply): Are you:

The Service member _____ **OR** a Family member _____ ?

Active duty _____ **OR** Retired _____ ?

| | |
|-------------------|--------------|
| Army _____ | Navy _____ |
| Air Force _____ | Marine _____ |
| Coast Guard _____ | Other _____ |

PATIENT'S OPINION OF NURSING CARE

Please give your honest opinion for each statement on the list by circling one of the five answers to describe the nurse(s) caring for you.

1. The nurse should be more attentive than he or she is.

Strongly Agree Agree Uncertain Disagree Strongly Disagree

2. Too often the nurse thinks you can't understand the medical explanation of your illness, so he or she just doesn't bother to explain.

Strongly Agree Agree Uncertain Disagree Strongly Disagree

3. The nurse is pleasant to be around.

Strongly Agree Agree Uncertain Disagree Strongly Disagree

4. A person feels free to ask the nurse questions.

Strongly Agree Agree Uncertain Disagree Strongly Disagree

5. The nurse should be more friendly than he or she is.

Strongly Agree Agree Uncertain Disagree Strongly Disagree

Patient's Opinion of Nursing Care
Page 2

6. The nurse is a person who can understand how I feel.

| | | | | |
|----------------|-------|-----------|----------|-------------------|
| Strongly Agree | Agree | Uncertain | Disagree | Strongly Disagree |
|----------------|-------|-----------|----------|-------------------|

7. The nurse explains things in simple language.

| | | | | |
|----------------|-------|-----------|----------|-------------------|
| Strongly Agree | Agree | Uncertain | Disagree | Strongly Disagree |
|----------------|-------|-----------|----------|-------------------|

8. The nurse asks a lot of questions, but once he or she finds the answers, he or she doesn't seem to do anything.

| | | | | |
|----------------|-------|-----------|----------|-------------------|
| Strongly Agree | Agree | Uncertain | Disagree | Strongly Disagree |
|----------------|-------|-----------|----------|-------------------|

9. When I need to talk to someone, I can go to the nurse with my problems.

| | | | | |
|----------------|-------|-----------|----------|-------------------|
| Strongly Agree | Agree | Uncertain | Disagree | Strongly Disagree |
|----------------|-------|-----------|----------|-------------------|

10. The nurse is too busy at the desk to spend time talking with me.

| | | | | |
|----------------|-------|-----------|----------|-------------------|
| Strongly Agree | Agree | Uncertain | Disagree | Strongly Disagree |
|----------------|-------|-----------|----------|-------------------|

11. I wish the nurse would tell me about the results of my test more than he or she does.

| | | | | |
|----------------|-------|-----------|----------|-------------------|
| Strongly Agree | Agree | Uncertain | Disagree | Strongly Disagree |
|----------------|-------|-----------|----------|-------------------|

12. The nurse makes it a point to show me how to carry out the doctor's orders.

| | | | | |
|----------------|-------|-----------|----------|-------------------|
| Strongly Agree | Agree | Uncertain | Disagree | Strongly Disagree |
|----------------|-------|-----------|----------|-------------------|

13. The nurse is often too disorganized to appear calm.

| | | | | |
|----------------|-------|-----------|----------|-------------------|
| Strongly Agree | Agree | Uncertain | Disagree | Strongly Disagree |
|----------------|-------|-----------|----------|-------------------|

14. The nurse is understanding in listening to a patient's problems.

| | | | | |
|----------------|-------|-----------|----------|-------------------|
| Strongly Agree | Agree | Uncertain | Disagree | Strongly Disagree |
|----------------|-------|-----------|----------|-------------------|

15. The nurse gives good advice.

| | | | | |
|----------------|-------|-----------|----------|-------------------|
| Strongly Agree | Agree | Uncertain | Disagree | Strongly Disagree |
|----------------|-------|-----------|----------|-------------------|

Patient's Opinion of Nursing Care
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16. The nurse really knows what he or she is talking about.

Strongly Agree Agree Uncertain Disagree Strongly Disagree

17. It is always easy to understand what the nurse is talking about.

Strongly Agree Agree Uncertain Disagree Strongly Disagree

18. The nurse is too slow to do things for me.

Strongly Agree Agree Uncertain Disagree Strongly Disagree

19. The nurse is just not patient enough.

Strongly Agree Agree Uncertain Disagree Strongly Disagree

20. The nurse is not precise in doing his or her work.

Strongly Agree Agree Uncertain Disagree Strongly Disagree

21. The nurse gives directions at just the right speed.

Strongly Agree Agree Uncertain Disagree Strongly Disagree

22. I'm tired of the nurse talking down to me.

Strongly Agree Agree Uncertain Disagree Strongly Disagree

23. Just talking to the nurse makes me feel better.

Strongly Agree Agree Uncertain Disagree Strongly Disagree

24. The nurse always gives complete enough explanations of why tests are ordered.

Strongly Agree Agree Uncertain Disagree Strongly Disagree

25. The nurse is skillful in assisting the doctor with procedures.

Strongly Agree Agree Uncertain Disagree Strongly Disagree

Adapted from N. Risser, Nursing Research, 1975.

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APPENDIX D

MODIFICATIONS TO INSTRUMENTS

Fitzsimons Army Medical Center has unique circumstances which warrant some modifications to the instruments selected for this study. Concerns exist about documentation of validity and reliability when making changes to widely used, well validated instruments. Some changes which should not have a significant impact on validity and reliability are simple ones which more clearly specify that the study is being performed at Fitzsimons Army Medical Center. For example, where the survey uses the words "my hospital," substituting "Fitzsimons Army Medical Center." Others are more specific, and although they had not been used previously and subjected to validity and reliability testing, should yield more useful information for those for whom the results were intended. The new questions have a balance of positive and negative statements regarding each topic to ensure consistency.

Nurses: For the IWS, demographic questions included their military or civilian status. Questions regarding how the BRAC affects their life personally and professionally are also helpful in establishing the impact of the closure on staff.

What is your status at Fitzsimons Army Medical Center?

Military _____ Civilian _____

Do you have any leadership responsibilities (such as head nurse, shift leader, team leader, etc.)?

Yes _____ No _____

If so, please indicate what that role is. _____

Are you involved with the Professional Officer Filler System (PROFIS)?

Yes _____ No _____

For Part B: Respondents indicate the extent of their agreement or disagreement with each statement, using 5-point Likert-type scales ranging from "strongly disagree" to "strongly agree." These questions are designed to address research question #1. The investigator reversed a few questions to assess reliability, and will reverse codes when scoring.

1. The military and civilian staff work well together.
2. I feel that readiness training interferes with my patient care duties. *While the investigator recognizes that readiness training is the work of those on active duty in the Army, this instrument is attempting to evaluate the perceptions of those involved in direct patient care.*

3. I am not happy with employment opportunities available to me when I no longer work at Fitzsimons.
4. The drawdown has given me an opportunity to accept or perform more challenging duties than might otherwise be possible.
5. I feel *frustrated* by the *turmoil* in my professional life created by the BRAC.
Frustration: a deep chronic sense or state of insecurity and dissatisfaction arising from unresolved problems or unfulfilled needs.
Turmoil: a state or condition of extreme confusion, agitation, or commotion.
6. I have plans for work after the hospital closes.
7. I am satisfied with those plans (if any).
8. The nursing staff on my unit has really pulled together to help each other with the change in workload.
9. I like my position as a federal employee.
10. The civilians and the military nursing staff do not work well together.
11. As the drawdown progresses, I have had to take on more responsibility than I am comfortable with.
12. There a difference in military - civilian working relationships since the BRAC began.

Patients:

Few modifications were made on the PSI. The questions should assess patient satisfaction whether it is a BRAC environment or not, therefore it adequately addresses research question #2. Respondents indicate the extent of their agreement or disagreement with each statement, using 5 point Likert-type scales ranging from "strongly agree" to "strongly disagree." To develop marketing strategies, as well as planning patient education, levels of frustration with the current situation regarding their health care benefits as well as how the beneficiaries plan to get their medical care when care is no longer available at Fitzsimons would be valuable. This will help focus the health benefits advisor's efforts where they are needed most. These questions were simply be presented in a descriptive fashion.

Demographic questions were added (age, gender, etc.). Additional items include active duty or retiree, service member or family member, which service the patient is associated with (Army, Air Force, Navy, Marine, Coast Guard, or other).

1. Fitzsimons is my primary source of medical care.
2. I am frustrated by the closure of Fitzsimons.
3. I do not know where I will receive my medical care when care at Fitzsimons is no longer available.
4. I am satisfied with my alternatives for care after base closure.

REFERENCES

- Abramowitz, Susan, Anne Alexis Cote, Elisabeth Berry. Analyzing patient satisfaction: A multianalytic approach. Quality Review Bulletin 1987; 13(4):122-130.
- Aquilera, DC. Crisis Intervention: Theory and Methodology. St. Louis: C.V. Mosby, 1990. As mentioned in Godfrey, Cynthia., 1994. Downsizing: Coping with personal pain. Nursing Management 25 (10): 90-93.
- Bales, Joel D. 1993. Preparing for the downsizing and closure of Letterman Army Medical Center: A case study. Military Medicine 158 (2): 84-90.
- Bindman, Andrew B., Dennis Keane, and Nichole Lurie. 1990. A public hospital closes: Impact on patient's access to care and health status. Journal of the American Medical Association 264 (22): 2899-2904.
- Bindman, Andrew B., and Nichole Lurie. 1991. The closing of Shasta General Hospital. Letter to the Editor reply. Journal of the American Medical Association 265 (14): 1827-1828.
- Cleary Paul, Lisa Keroy, Georgia Karapanos, and William McMullen. 1989. Patient assessments of hospital care. Quality Review Bulletin 15(6): 172-79.
- Davies, Allyson R. and John E. Ware, Jr.. GHAA's Consumer satisfaction survey and user's manual. Washington, D.C. Group Health Association of America, 1988.
- Davies, Allyson R. and John E. Ware, Jr. 1988. Involving consumers in quality of care assessment. Health Affairs 7(1): 33-48.
- Doering, Elaine. 1983. Factors influencing inpatient satisfaction with care. Quality Review Bulletin 9:291-299.
- Domingue, Naydja, and Enrica K. Singleton. 1993. Hospital closure: Reflections of a former nurse executive. Journal of Nursing Administration 23 (5): 49-55.
- Donabedian, Avedis. 1988. The quality of care: How can it be assessed? JAMA 260: 1743-48.
- Godfrey, Cynthia. 1994. Downsizing: Coping with personal pain. Nursing Management 25 (10): 90-93.
- Goodell, Teresa Tarnowski, Harriet Van Ess Coeling. 1994. Outcomes of nurses' job satisfaction. Journal of Nursing Administration 24 (11): 36-41.

- Herzberg, Frederick, Bernard Mausner, Barbara Bloch Snyderman. The motivation to work. Second edition. New York: John Wiley & Sons; 1959.
- Hinshaw, Ada S., and Jan R. Atwood. 1979. Care/comfort quality criterion and standards. An empirical model tested for patient and staff outcomes. In Clinical nursing research: Its strategies and findings II, ed. E. Bauwens. Indianapolis. Sigma Theta Tau. 75-90.
- Hinshaw, Ada S., and Jan R. Atwood. 1982. A patient satisfaction instrument: Precision by replication. Nursing Research 31 (3): 170-191.
- Institutional Review Committee. 1995. 14 November 1995 Memorandum. Fitzsimons Army Medical Center: Department of Clinical Investigation.
- Kerlinger, Fred N. 1986. Foundations of behavioral research. New York: Holt, Rinehart and Winston.
- Klein, Russell C., and Donna G. Klein. 1995. Minimizing the risk of liability. In The high risk patient: Management of the critically ill, ed. Edward D. Sivak, Thomas L. Higgins, and Adam Seiver. 1718-1726. Media, PA. Williams and Wilkins.
- Kocher, Kathryn M., and George W. Thomas. 1994. Retaining Army nurses: A longitudinal model. Research in Nursing and Health 17: 59-65.
- Lawler Edward E., and Lyman W. Porter. 1967. The effect of performance on job satisfaction. Industrial Relations 7(1):20-28.
- Lawton, U. 1970. Why nurses abandon the profession. Nursing Times 1022 (August).
- Lurie, Nicole. 1984. Termination from Medi-Cal -- Does it affect your health? The New England Journal of Medicine 311(7) : 480-484.
- Maloney, Joseph P., Bruce C. Allenbach, Claudia Bartz, and Sandra L. Peterson. 1993. Patient care and nursing practice when staff requirements exceed staff availability. Military Medicine 158 (8): 512-516.
- Mangelsdorff, A. David. 1994. Patient attitudes and utilization patterns in Army medical treatment facilities. Military Medicine 159(11): 686-690.
- McDaniel Charlotte, and Thelma Patrick. 1992. Leadership, nurses, and patient satisfaction: A pilot study. Nursing Administration Quarterly 16(3):72-74.
- Mundy, Claudia M. and Darlene M. Gilcreast. 1994. Organizational downsizing and closure in two U.S. Army hospitals. Military Medicine 159(3):224-6.

- Mundy Claudia M. 1993. The challenge of closure. Journal of Nursing Administration 23(4): 35-36.
- Nakata, Jennifer A., and Coleen Saylor. 1994. Management style and staff nurse satisfaction in a changing environment. Nursing Administration Quarterly 18 (3): 51-57.
- Nelson, Eugene C., Celia O. Larson, Allyson R. Davies, David Gustafson, Pedro L. Ferreira, and John E. Ware, Jr. 1991. The patient comment card: A system to gather customer feedback. Quality Review Bulletin September: 278-286.
- Parrinello, Kathryn. 1990. Nurses' satisfaction with their work and patient satisfaction with hospital care: An organizational analysis. The University of Rochester. Ph.D. Dissertation.
- Polit, Denise F. And Bernadette P. Hungler. 1993. Nursing research: Methods, appraisal, and utilization. Philadelphia: J.B. Lippincott Company.
- Pugno, Perry A., Robert Beehler, Fred Cox, Harry Albright, Patricia A. Anderson. 1991. The closing of Shasta General Hospital. Journal of the American Medical Association 265 (14): 1827-1828.
- Relf, Michael. 1995. Increasing job satisfaction and motivation while reducing nursing turnover through implementation of shared governance. Critical Care Nursing Quarterly 18 (3): 7-13.
- Slavitt, Dinah, Paula Stamps, Eugene Piedmonte, and Ann-Marie Haase. 1979. Measuring nurses' job satisfaction. Hospital and Health Services Administration 24: 62-76.
- Spitzer, Roxane B. 1988. Meeting consumer expectations. Nursing Administration Quarterly 12(3): 31-39.
- Stamps, Paula L., and Eugene B. Piedmonte. 1986. Nurses and work satisfaction. Ann Arbor: Health Administration Press.
- Taylor, Frederick W. 1911. The principles of scientific management. New York: Harper and Brothers.
- Ulrich, Dave. 1983. Organizational surveys: Development and application. Fort Ord, California. Organizational Effectiveness Center and School.
- Vilardo, Laura E. 1993. Linking collaborative governance with job satisfaction. Nursing Management 24(6): 75.

- Ware, John E. Jr., Allyson R. Davies and Anita L. Stewart. 1978. The measurement and meaning of patient satisfaction. Health and Medical Care Services Review 1 (1): 1-15.
- Ware, John E. Jr., and Ron D. Hays. 1988. Methods for measuring patient satisfaction with specific medical encounters. Medical Care 26 (4): 393-402.
- Weisman Carol S., Constance A. Nathanson. 1985. Professional satisfaction and client outcomes. Medical Care 23 (10):1179-1193.
- Yoder, Linda H. 1995. Staff nurses' career development relationships and self reports of professionalism, job satisfaction, and intent to stay. Nursing Research 44(5): 290-297.